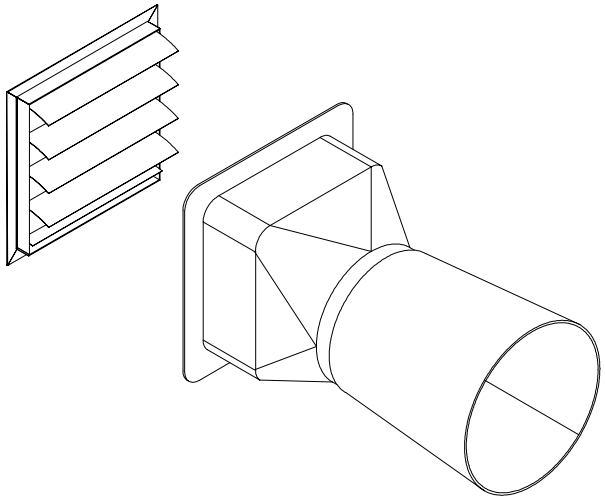
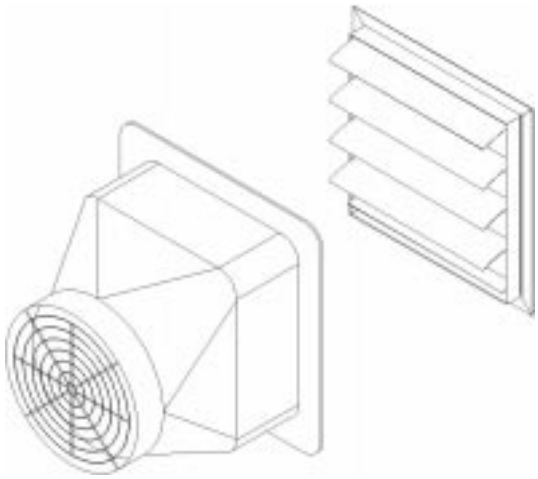
PNEG-1016

APP Series Fans Installation & Operation Guide





Knockdown Fan Assembly Instructions

Personnel operating or working around this equipment should read this manual. This manual must be delivered with equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment. Any misuse of the equipment may void the warranty.

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SAFETY GUIDELINES

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting ***personal safety*** and ***preventing equipment problems***. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidlines.To help you recognize this information, we use the symbols that are defined below. Please read the manual and pay attention to these sections. Failure to read this manual and it's safety instructions is a misuse of the equipment and may lead to serious injury or death.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION **CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE **NOTE** indicates information about the equipment that you should pay special attention to.

GENERAL SAFETY STATEMENTS

This manual describes the installation and operation for all standard production Fiberglass Fans. Safety decals should be read and understood by all people in the fan area. If a decal has been damaged or is missing, contact AP/Cumberland for a free replacement:

Grain Systems Incorporated
1004 E. Illinois St.
Assumption, IL 62510
(217) 226-4401

Decals are identified by the "DC" part number in the bottom right hand corner of all decals.

The decals for the fans are shown here. The following page shows its location on the Fiberglass Fans.

DANGER!
High voltage.
Will cause serious injury or death.
Lockout power before servicing.
WARNING
Stay clear of rotating blade. May cause serious injury.
Disconnect power before servicing.
Blade may start automatically.
WARNING
Thrown or flying debris. May cause serious injury.
Use caution when approaching fan.

DC-1224-1451-1452: This decal is located on the bottom right hand side of the venturi on all Fiberglass Fans. It measures 7.5" (19 cm) long x 5.0" (12.7 cm) wide.

DANGER
SHEAR POINT.
Keep hands clear of moving parts. Do not operate with guard removed. Disconnect and lockout power before servicing.

DC-994: This decal is located on the bottom right hand side of the venturi on all Belt Drive Fans. It measures 4.5" (11.4 cm) long x 2.25" (5.7 cm) wide.

Unpacking

When receiving the unit, inspect carefully for any damage that may have occurred during transit.

Shipping damage claim must be filed with carrier.

General Safety Information

This unit should be assembled and installed by a qualified technician.

Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system by using a seperate ground wire connected to the motor's ground lug, or other suitable means.

Protect power cable from coming in contact with sharp objects.

Do not kink power cable and never allow cable to come in contact with oil, grease, hot surfaces, or chemicals.

Make certain that the power source conforms to requirements of your equipment.

Installation

Fans should be installed in an exterior wall located where there will be no obstructions to the flow of air into or out of the fan.

Once a location has been determined; an opening should be made in the wall and framed to provide enough clearance around the fan housing (See Rough Opening Chart page 12).

Framing must be able to support the weight of the fan assembly.

Manual handling of the fans may result in serious injury. Where appropriate, use mechanical methods of lifting during installation. Where manual handling is required enure you have adequate assistance.

Position fan assembly in the framed opening. Rigidly mount the housing side flanges to the framework using mounting screws.

Remove electrical cover and connect power leads to motor terminals using approved wiring method. It is recommended to use the Watertight Connector included with the motor if it is possible in your application. (Motor terminal connection data is provided on motor nameplate). Use adequate size wire for all branch and feeder runs. When speed control is used, follow the installation procedures recommended by the speed control manufacturer.

Re-install electrical cover.

Unit is now ready for operation.

Operation

Units may be operated using a switch, thermostat, timer, or controller.

Follow wiring and operation instructions furnished with the control system selected.

When using speed controllers, follow the operation procedures recommended by the controller manufacturer.

Set thermostat setting to a desired temperature. Fan will operate only when ambient temperature is above the thermostat set temperature.

Some controllers have idle speed controls. Set idle speed such that the blade RPM is within the RPM range listed in the Performance Table.

Cleaning

It is advisable to clean blade and shutter at regular intervals. This will remove any accumulated dirt, which would cause fan blade to become unbalanced and result in excessive vibration and poor performance.

Lubrication

Motor is prelubricated at factory and will not require any further lubrication.

Safety in Maintenance

While the APP Fan is designed to keep maintenance to a minimum, some repairs will be necessary in the course of the life of the machine. Do not attempt any repairs on the machine unless you are competent to do so. Remember that the APP Fan may in cases operate under automatic control and will start without warning. Never attempt any work on the APP Fan without first isolating the machine from the mains power, and locking the isolator so that only you can turn the power back on.

Electrical Wiring

All wiring should be installed in accordance with National, State, and Local electrical codes. Fans used to ventilate livestock buildings or other rooms where continuous air movement is essential should be connected to individual electrical circuits, with a minimum of (2) circuits per room. We strongly recommend the installation of supplementary natural ventilation as well as a back-up thermostat and an alarm system on at least one cooling stage.

For electrical connection requirements, refer to diagram on motor nameplate and to information enclosed with the "AVS" fan control to be used.

Motor overload protection should be provided for each fan. A Circuit Breaker Switch or slow blow motor type fuses must be used.

Note: a safety cut-off switch should be located adjacent to each fan, such as "AP"#'s:
E100A1063 - 2.5 Amp
E100-A1064 - 5.0 Amp
E100-A1065 - 8.0 Amp
E100-A1066 - 15.0 Amp

Back-up Thermostats such as the TH-1, should always be used in conjunction with your Control System. These should be placed on a seperate circuit to give your animals ventilation in the event that your controller fails.

Electrical Safety

Provision of an adequate and safe power supply to the APP Fan unit is essential to your safety. GSI recommends that a competent and qualified electrician undertake all electrical wiring. All wiring is to be installed to the National Standards and Regulations relevant to your Country and Region.

Users Manual

This manual contains information and instructions essential to the safe installation and use of this APP Fan. The manual should be read thoroughly before attempting any installation or use of the APP Fan. This manual should be kept with the APP Fan, or in a location where it can be readily accessed. Failure to read this manual and it's safety instructions is a misuse of the equipment.

Correct Use of Your APP Fan

The APP Fan is designed solely for the purpose of ventilating agricultural buildings. Use of the system in any other way is a misuse of the system and may endanger yours or another person's safety and health.

In the installation and use of the APP Fan, only genuine AP/GSI parts are to be used. Use of other non-genuine parts is a misuse of the system, and may lead to dangerous situations risking the safety and health of you and others.

This machine is not designed for use in atmospheres where the risk of explosion is foreseen. Such environments may include enclosed areas of high dust concentrations, gas, vapours, and fumes. Use in such an environment is prohibited. If in doubt contact GSI or your dealer.

Safety Guards

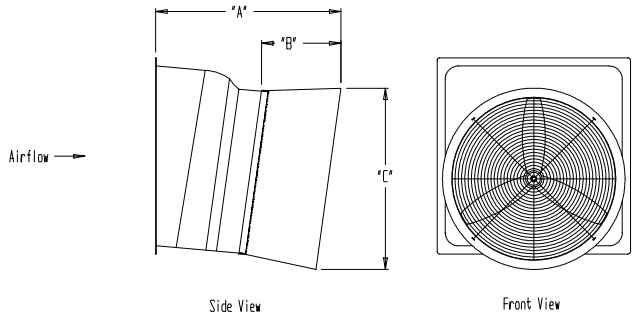
The APP Fan contains moving and electrical parts, which would cause serious injury, even death if touched. Guards are placed on the machine to protect you. Operating the machine at any time with guards removed or incorrectly fitted is a serious misuse of the machine and endangers you and other people's safety.

Safety in Handling the APP Fan

Manual handling of the fans can be a cause of serious injury. Wherever possible use mechanical lifting equipment when lifting or moving fans during installation. Where manual handling is required seek assistance from other people.

To prevent injury, use suitable hand protection.

Fan Models	CFM @ 0.00 SP	Weight Lbs./Kgs.	Cubes Ft./Mtrs.
APP-12F	1700	37 Lbs./16.8 Kgs.	8.7 Ft./.25 Mtrs.
APP-14F	2487	47 Lbs./21.3 Kgs.	8.7 Ft./.25 Mtrs.
APP-14FC	2830	55 Lbs./25 Kgs.	14 Ft./.4 Mtrs.
APP-18F	4387	54 Lbs./24.5 Kgs.	18.2 Ft./.52 Mtrs.
APP-18FC	5090	65 Lbs./29.5 Kgs.	26.7 Ft./.76 Mtrs.
APP-24F	6442	75 Lbs./34 Kgs.	19.9 Ft./.56 Mtrs.
APP-24FC	7530	90 Lbs./40.8 Kgs.	34.2 Ft./.97 Mtrs.
APP-36F	11113	127 Lbs./57.6 Kgs.	34.5 Ft./.97 Mtrs.
APP-36FC	12290	162 Lbs./73.5 Kgs.	55.7 Ft./1.58 Mtrs.
APPB-36	11113	135 Lbs./61.2 Kgs.	34.5 Ft./.97 Mtrs.
APPB-36C	12290	170 Lbs./77.1 Kgs.	55.7 Ft./1.58 Mtrs.
APPB-50	20856	214 Lbs./97 Kgs.	65 Ft./1.85 Mtrs.
APPB-50C	23894	265 Lbs./120.2 Kgs.	65 Ft./1.85 Mtrs.



Dimension Chart

Model	"A"	"B"	"C"
APP-12F	25 5/8"	N/A	12 ½"
APP-14F	21"	N/A	15 ½"
APP-14FC	40"	20 5/8"	20 5/8"
APP-18F	22 3/16"	N/A	20"
APP-18FC	40"	22"	25 3/8"
APP-24F	22"	N/A	26"
APP-24FC	41"	23 3/8"	31 7/8"
APP / APPB-36F	30 ¼"	N/A	37 7/8"
APP / APPB-36FC	54 ½"	27"	44 3/8"
APPB-50	34 ¼"	N/A	50 3/8"
APPB-50C	55"	24"	56 3/8"

Propellor speeds for APP Fans stated in the table are the maximum permissable speeds. Exceeding these may result in damage to the fan and serious injury to the operator. CFM Ratings listed below were all taken at .05 Static Pressure.

	APP-12F	Speed Curve #9	
Volts	RPM	CFM WO/Cone	CFM W/Cone
230	1765	1432	N/A
135	1675	1351	N/A
119	1575	1251	N/A
115	1475	1133	N/A
112	1375	983	N/A
111	1275	964	N/A
109	1175	780	N/A
107	1075	700	N/A
105	975	590	N/A
104	875	520	N/A
103	775	445	N/A
102	675	380	N/A
101	575	310	N/A
99	475	242	N/A

	APP-14F W/187242	Speed Curve #7	
Volts	RPM	CFM WO/Cone	CFM W/Cone
230	1765	2367	2631
151	1675	2230	2487
145	1575	2100	2292
144	1475	1953	2130
143	1375	1808	2018
142	1275	1659	1813
140	1175	1471	1581
139	1075	1242	1487
137	975	1044	1280
135	875	854	1023
131	775	558	489
130	675	290	263
121	575	167	160

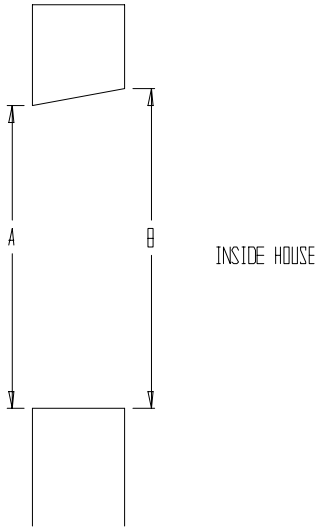
	APP-14F W/164065	Speed Curve #9	
Volts	RPM	CFM WO/Cone	CFM W/Cone
230	1765	2349	2629
157	1675	2229	2592
136	1575	2092	2271
130	1475	1954	2133
128	1375	1817	2015
124	1275	1622	1813
121	1175	1476	1584
118	1075	1301	1492
115	975	1011	1281
113	875	782	1026
109	775	478	634
104	675	326	278

	APP-18F	Speed Curve #8	
Volts	RPM	CFM WO/Cone	CFM W/Cone
230	1765	3651	4394
174	1675	3480	4221
158	1575	3251	3898
142	1475	3012	3664
137	1375	2786	3480
133	1275	2508	3168
129	1175	2202	2788
126	1075	1990	2431
122	975	1710	2102
118	875	1396	1722
113	775	821	1401
109	675	566	762
107	575	273	298
103	475	112	153

	APP-24F	Speed Curve #4	
Volts	RPM	CFM WO/Cone	CFM W/Cone
230	1040	5798	7386
194	940	5160	6353
176	840	4784	5648
157	740	3830	4688
143	640	2875	3842
130	540	2072	2902
115	440	823	1596
103	340	368	331

	APP-36F	Speed Curve #5	
Volts	RPM	CFM WO/Cone	CFM W/Cone
230	850	9260	11000
202	750	7894	9421
197	650	6587	7764
195	550	5482	6293
192	450	3516	2953
188	350	1286	1362

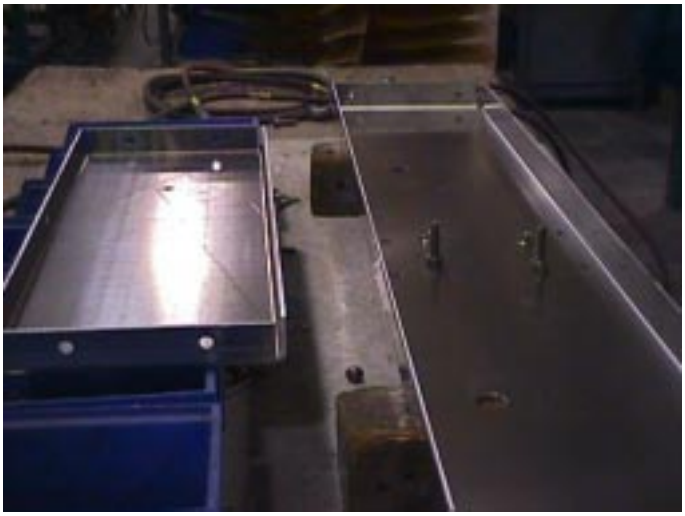
Fan Rough Openings



FAN MODEL	WIDTH(IN.)	INSIDE HEIGHT(IN.)	OUTSIDE HEIGHT(IN.)
		B	A
APP-12	17	17.5	16.5
APP-14	20	20	19.25
APP-18	25.5	26	25
APP-24	34.5	34.5	33.5
APP-36	44.5	44.5	43.5
APPB-36	44.5	44.5	43.5
APPB-50	56	56	55

APPB-50C KNOCKDOWN INSTRUCTIONS

1. Remove housing from packing crate. Locate hardware package box from crate. Locate box found in the front of the crate labelled 11-0208, 11-0209, and 16-0034.
2. Remove one bearing plate 11-0208, one motor mount leg 11-0209, and one spring tensioner plate 16-0034. Remove the following hardware from the box: four 3/8” x 1-1/2” bolts part # S-8140, four 3/8”-16 hex nuts part # S-7519, four 3/8” washers part # S-7021, one 1/4”-20 eyebolt, two 1/4” washers part # S-6673, and one 1/4”-20 nylock nut part # S-7307.



3. Attach motor mount leg (part # 11-0209) to the bearing plate (part # 11-208), using two of the 3/8” bolts. Place two of the 3/8” bolts through the bearing plate and attach the motor mount leg securely to it, using one washer per bolt. Slide the 1/4”eye bolt through the hole on the motor mount leg, place the two 1/4” washers on the eye side of the bolt as shown below. Tighten the eyebolt down securely, with its 1/4” nylock nut.

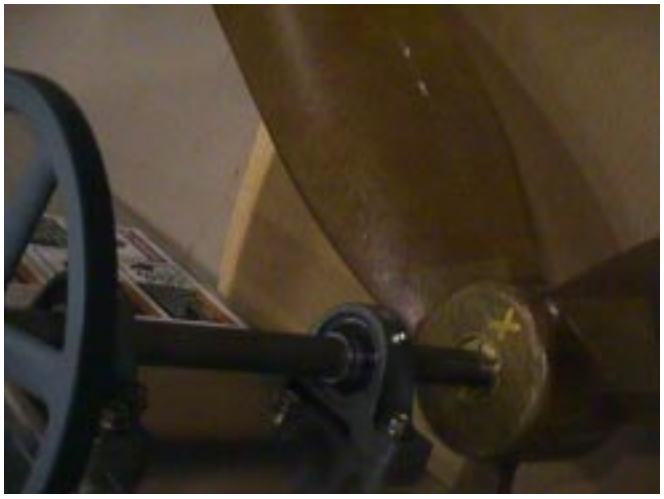
4. Attach spring tensioner plate part # 16-0034 to the motor mount with the remaining 3/8” hardware, the slotted flat face of the spring tensioner will face the U-shaped bottom of the bearing.

5. Take the assembled motor mount and slide it into back end of the housing with the “T” facing upwards. Line up the the holes on the assembly to the predrilled holes in the housing. The assembly should be 10” in from the housing edge. Cut a board to approximately 29.5”, wedge this board into the space above the “T” on the motor mount assembly. This will hold the assembly in proper position to offset any settling the housing may have experienced in shipment.

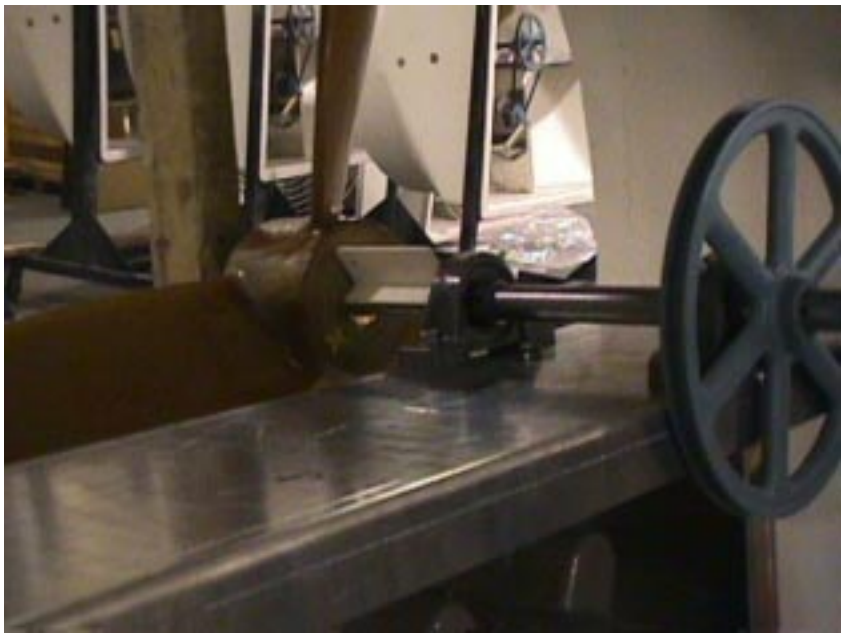
6. Gather six 5/16” x 1” bolts part # S-7009, 5/16” washers part # S-7005, and 5/16”-18 nuts part # S-8452 from the hardware pack. Fasten two 5/16” bolts loosely to the “T” and the housing, one to each side. Remove board from its position.

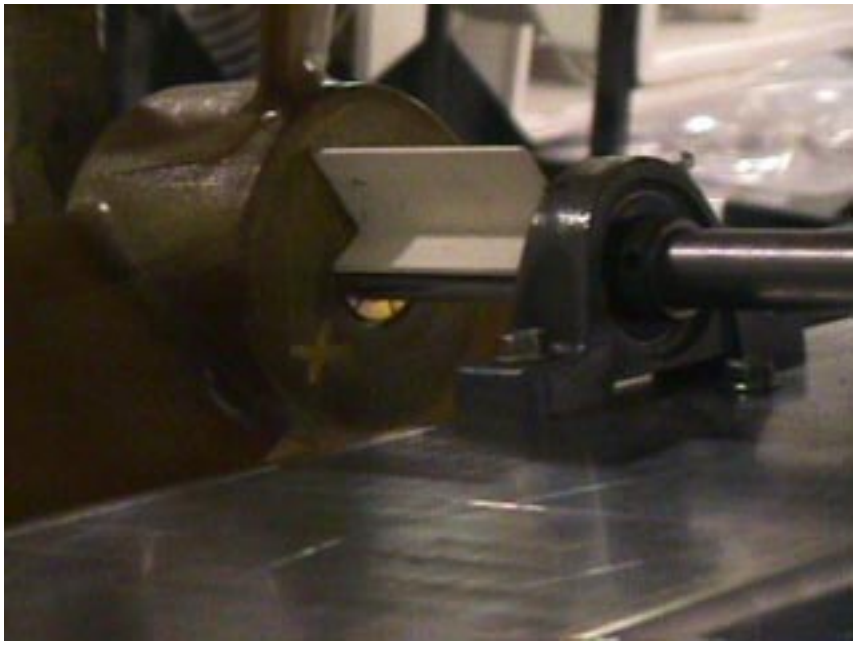
7. Get one 1” shaft part # 16-0005, two pillow block bearings part # 16-0076, four 3/8” x 1-1/2”, four 3/8”-16 nuts part # S-8452, and four 3/8” washers part # S-7021 from the hardware pack. Slide the two pillow block bearings onto the shaft, have the allen screw collars facing each other inwards. Insert bolt through bearings and into the bearing mount plate, loosely fasten.

8. Locate the prop, trantorque and the large driven pulley, part #s 13-0044, 13-0046, and 16-0007 respectively. Slide the prop onto orifice end of the shaft and slightly tighten the trantorque. Keep the shaft flush with the nut of the trantorque . Slide the driver pulley onto the other end of the shaft, **do not tighten**.



9. Cut a spacer out of rigid substance (wood, metal, plastic,etc.) to a distance of 3-3/8”. Loosen the trantorque until the prop can be moved along the shaft. Place the spacer between the front bearing and the backside hub of the prop. Slide the prop until the hub is pressed against the spacer. Tighten trantorque down. Making sure the bearing remains flush against the spacer, tighten the front bearing down.





10. Cut a board to approximately 50”. Wedge this board into the orifice of the fan. This will even out any settling that may have occurred during shipment. Spin the prop until one blade points directly down. Measure from the blade to the edge of the orifice. Move the bottom leg of the motor mount assembly “T” until this measurement reads 7.5”. Spin the bottom prop until that same blade is facing straight up, and than measure again. When the 7.5” measurement is established, secure the bottom leg with the 5/16” bolts. Spin the prop and insure a consistent gap between the tips of the blades and the wall of the orifice housing.

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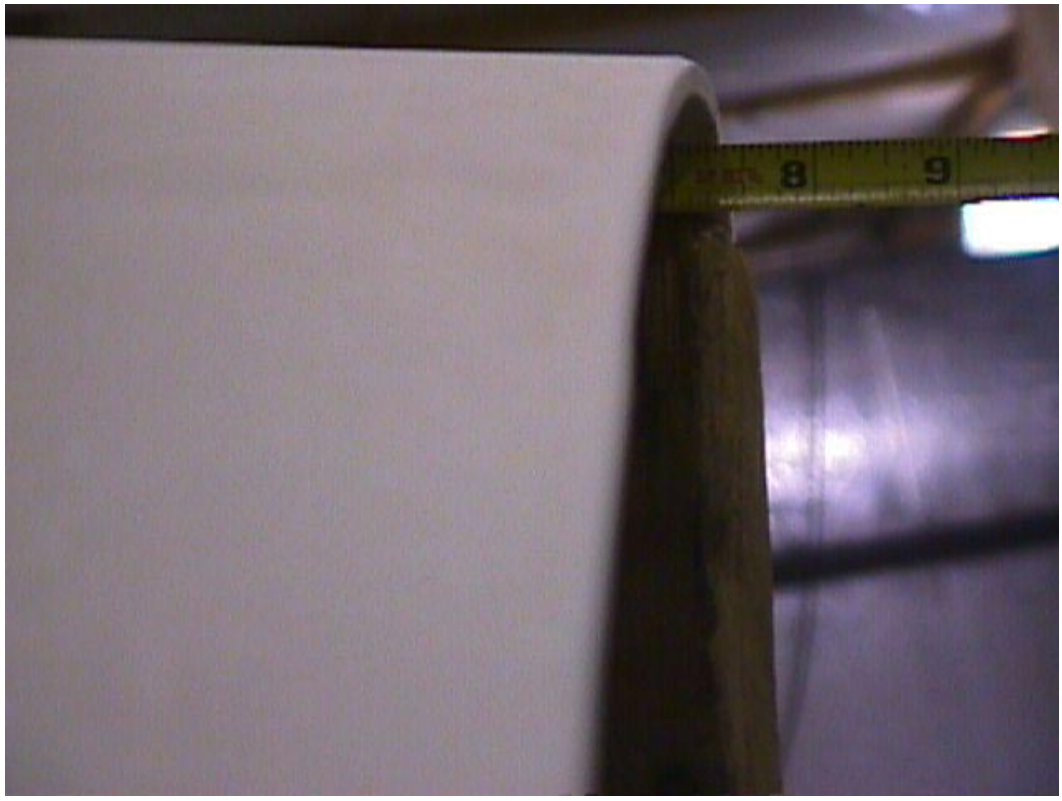
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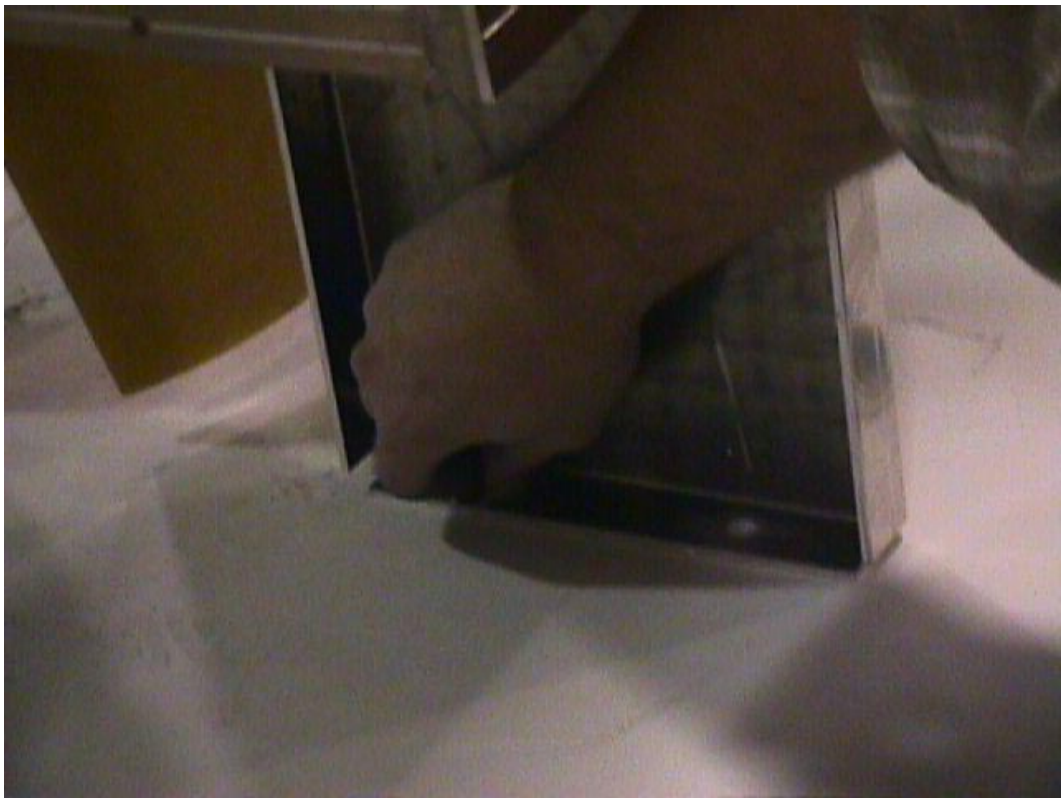
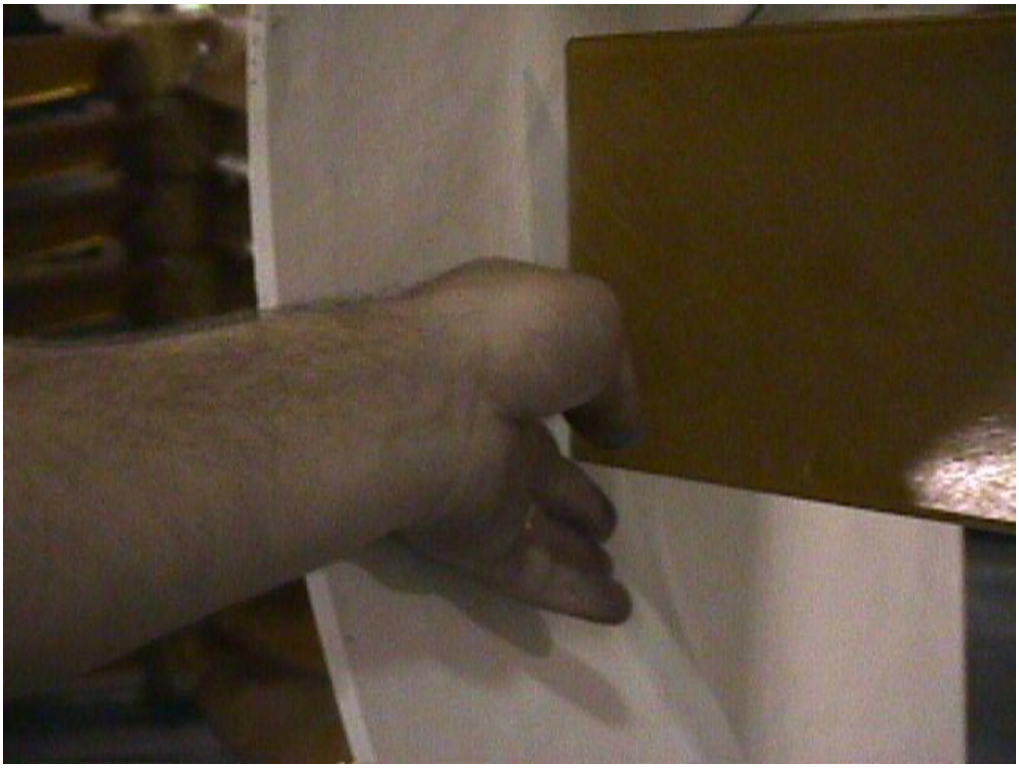
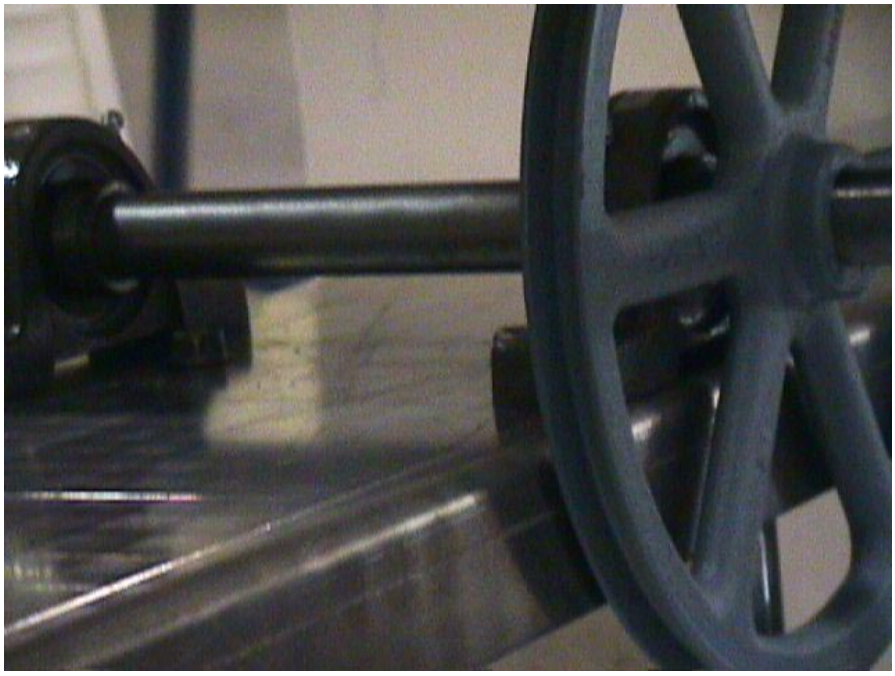


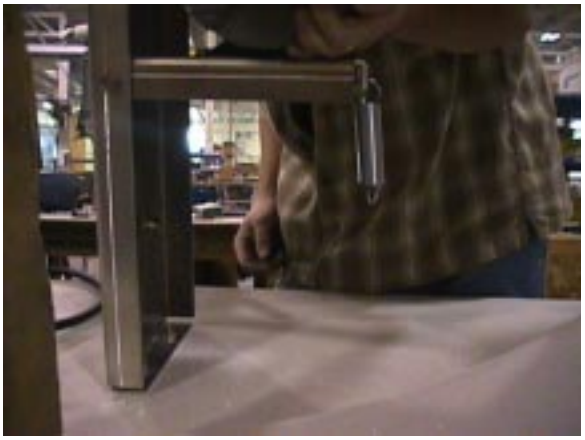


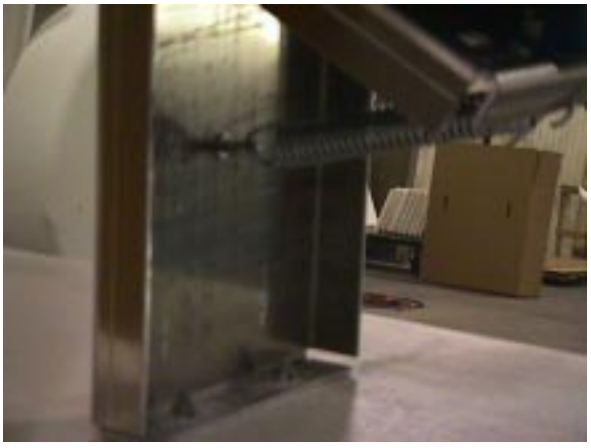
11. Slide the driven pulley part # 16-0007 until its flush to the top bar of the “T” of the motor mount assembly. Locate the back bearing so that it is flush to the driven pulley. Tighten down the back bearing.



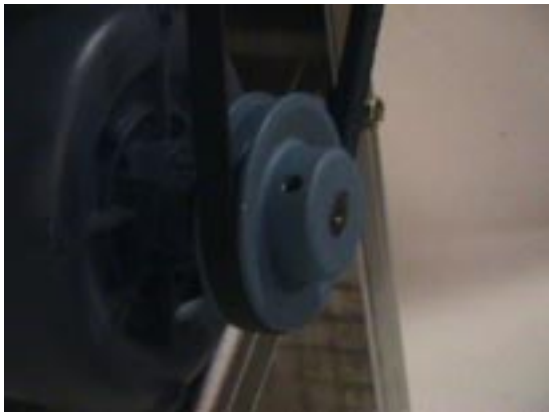
12. Take the motor part # 15-0084, driver pulley part # 16-0016, and spring part # 16-0040 out of the packing crate. Slide the driver pulley onto the shaft with the hub facing away from the shaft. Slide the pulley until the end of the pulley hub is flush with the end of the shaft. Take the 3/16 x 3/16 x 1 key part # S-4179, slide it into the slot on the shaft. Tighten the allen screw down until it firmly bites the key.

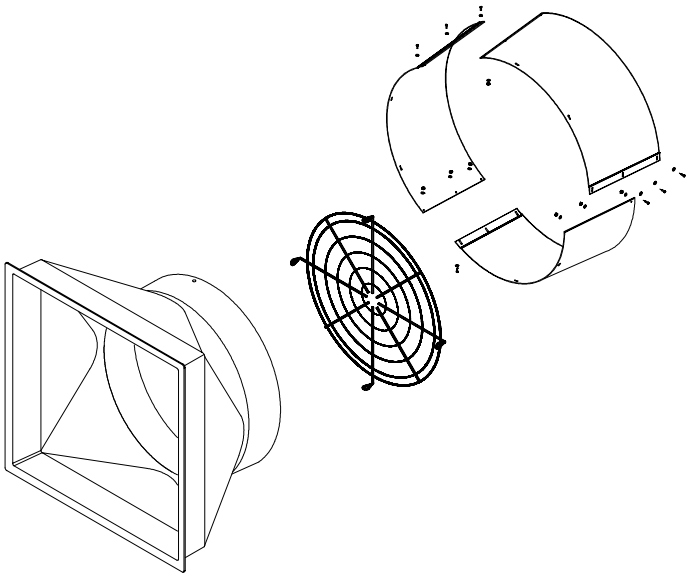
13. Take four 5/16” bolts part # S-7009, four 5/16” nuts part # S-8452, and four 5/16” washers part # S-7005 from the hard-ware pack. Carefully raise the spring tensioner plate to a horizontal position. Place the motor on the plate, line up the motor mount cradle holes with the pivot plate back two slots. Slide the bolts through the motor and loosely fasten. Slide the motor to the back of the pivot plate slots and to the right on the motor cradle slots. Tighten the bolts down. Hook one end of the spring into the center of the pivot plate. Slowly pivot the motor plate downard until the other end of the spring can be attached to the eyebolt.





14. With the large driven pulley remaining loose, slide the belt onto the motor drive pulley and the large driven pulley. Spin the the large pulley countclockwise to slide it out to a equidistant position with the drive pulley. Look down the belt to insure alignment. Insert the long 1/4 x 1/4 x 2 key into the keyway on the shaft. Tighten down the set screw on the pulley. Using a torque wrench, set the set screws on the bearings to torque of 65 in/lbs. Likewise set the trantorque on the prop to a setting of 80 ft/lb. Examine the last two pictures in the following sequence to view the complete fan. Refer to PNEG-876 and PNEG-386 (found in part # 16-0052) for further instructions on shutter and guard installation.





50" Cone Assembly

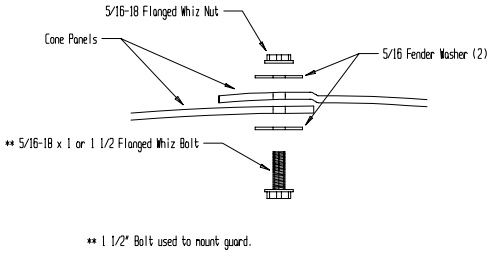
Note: Fan must be installed in the wall before proceeding with Discharge Cone installation.

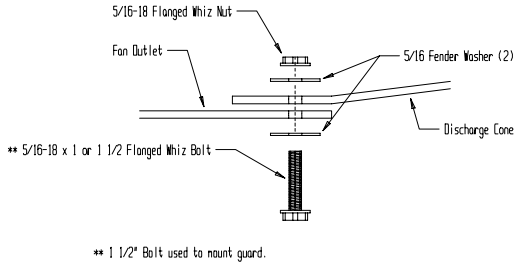
Remove packaging from cone and guard sections.

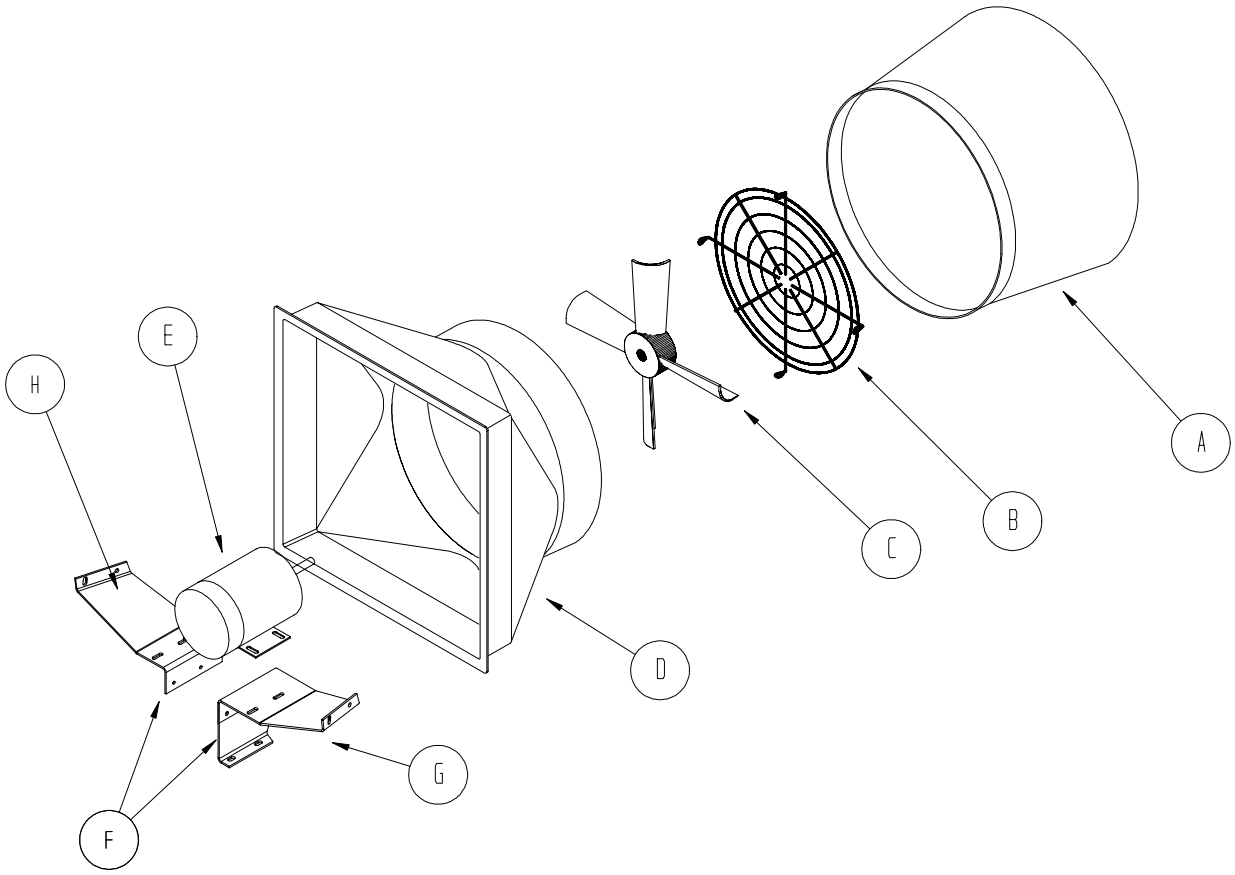
Find Hardware Package #10-0068 consisting of the following parts:

99-0009 - - - 5/16 SS Fender Washer - - - 38pcs.
D03-0159 - - - 5/16-18 Flanged Whiz Nut - - - 19 pcs.
S-7447 - - - 5/16-18 x 1" SS Whiz Bolt - - - 12pcs.
S-8168 - - - 5/16-18 x 1 1/2" SS Whiz Bolt - - - 7pcs.

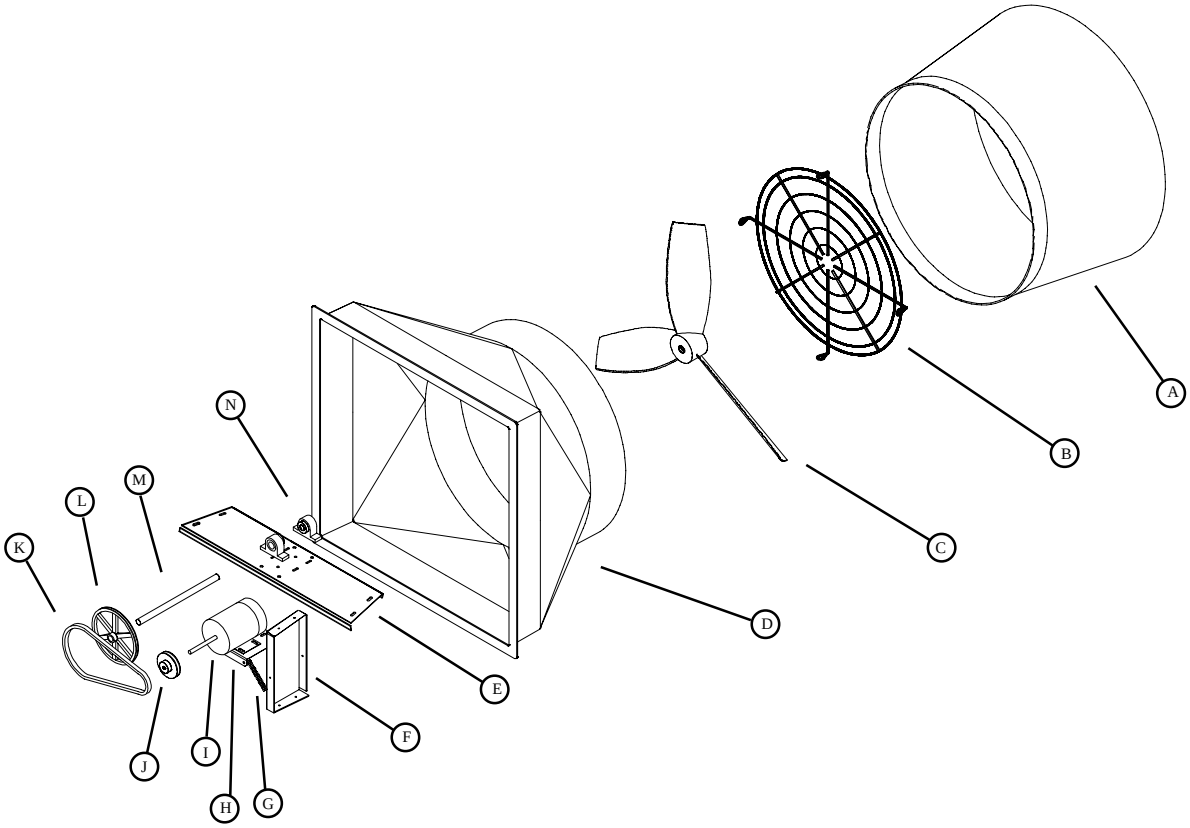
Assemble the cone on the ground with the 1" bolts, fender washers and whiz nuts, leaving bolts loose. Leave the 1 1/2" bolts out completely until you mount the cone on the fan outlet. Use the pilot hole to help align disharge cone.




5/16-18 Flanged Whiz Nut
Fan Outlet
5/16 Fender Washer (2)
Discharge Cone
** 5/16-18 x 1 or 1 1/2 Flanged Whiz Bolt
** 1 1/2" Bolt used to mount guard.



Description	APP-12F	APP-14FC	APP-18FC	APP-24FC	APP-36FC
A : Cone	N/A	12-0087F	12-0085F	12-0080F	12-0093
B : Grill	11-0045	11-0200	11-0201	11-0202	11-0203
C : Prop	13-0115	13-0106	13-0107	13-0014	13-0015
D : Housing	12-0117	12-0086F	12-0084F	12-0083F	12-0091
E : Motor	15-0109	15-0109	15-0110	15-0105	15-0116
F : Motor-Mount	11-0217	11-0193	11-0190	11-0181	11-0212
G : Rt. Motor-Mount	N/A	11-0194	11-0102	11-0180	N/A
H : Lt. Motor-Mount	N/A	11-0195	11-0191	11-0179	N/A



Description	APPB-36C	APPB-50C
A : Cone (Optional)	12-0085F	12-0094
B : Grill	11-0203	11-0204
C : Prop	13-0062	13-0044
D : Housing	12-0091	12-0092
E : Bearing Plate	11-0102	11-0208
F : Motor Mount Leg	11-0144	11-0209
G : Spring	16-0040	16-0040
H : Spring Tension Plate	16-0034	16-0034
I : Motor	(1Ø) 15-0032 / (3Ø) 15-0086	(1Ø) 15-0029 / (3Ø) 15-0084
J : Sheave	16-0016	16-0016
K : Belt	16-0061	16-0012
L : Pulley	16-0014	16-0007
M : Shaft	(CR) 16-0005 / (SS) 16-0004	(CR) 16-0005 / (SS) 16-0004
N : Bearing	16-0076	16-0076
O : Shutter	PS-42	PS-54-4

GSI GROUP

Limited Warranty

The GSI Group, LLC. ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions: The Limited Warranty period is extended for the following products:

	Product	Warranty Period
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years
	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **
	Feed Tubes (1.75" & 2.00")	10 Years *
	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems Farm Fans Zimmerman	Portable & Tower Dryers	2 Years
	Portable & Tower Dryer Frames and Internal Infrastructure †	5 Years

* Warranty prorated from list price:
0 to 3 years – no cost to end-user
3 to 5 years – end-user pays 25%
5 to 7 years – end-user pays 50%
7 to 10 years – end user pays 75%

** Warranty prorated from list price:
0 to 3 years – no cost to end-user
3 to 5 years – end-user pays 50%

† Motors, burner components and moving parts not included. Portable Dryer screens included. Tower Dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12^{th}) month from the date of purchase and continuing until the sixtieth (60^{th}) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (i) PRODUCT MANUFACTURED OR SOLD BY GSI OR (ii) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

a member of
THE GSI GROUP

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